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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Desnoyers, et al.
Appl. No.	:	09/931,836
Filed	:	August 16, 2001
For	:	NOVEL PEPTIDES THAT INDUCE CHONDROCYTE REDIFFERENTIATION
Examiner	:	Jiang, Dong
Group Art Unit	:	1646

DECLARATION OF LUC DESNOYERS AND WILLIAM I. WOOD UNDER 37 CFR §1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

We, Luc Desnoyers and William I. Wood, declare and state as follows:

1. We are the inventors of the subject matter that is presently claimed in the above-captioned patent application.

2. During the time period in which all of the events and activities described herein occurred, we were employed by Genentech, Inc., the assignee of the above-captioned application.

3. All of the events and activities described herein were performed by us personally, or under our direction, as part of our duties as employees of Genentech, Inc.

4. The invention claimed in the above-captioned patent application was conceived prior to April 20, 1999 and diligently reduced to practice thereafter in the U.S. as described below.

5. Prior to April 20, 1999, we conceived of the polypeptides claimed in the above-captioned patent application. This is demonstrated by the attached sequence printout (Exhibit A), which was generated prior to April 20, 1999, and which shows the complete sequence of the polypeptide having the sequence of SEQ ID NO:2. The attached printout also shows the complete sequence of the nucleic acid which has the sequence of SEQ ID NO:1. As evidenced by the sequence printout, we were in possession of the complete polypeptide sequence prior to April 20, 1999.

6. The date deleted from page 1 of Exhibit A is a date prior to April 20, 1999, and was redacted pursuant to M.P.E.P. § 715.07. The redacted date is the date when the data were generated; the date the report was printed, April 16, 2004, remains on the report.

7. After initially conceiving the polypeptide having the sequence of SEQ ID NO:2 prior to April 20, 1999, we diligently reduced the claimed subject matter to practice by working to express and purify the polypeptide and to run it systematically through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on January 12, 1999 and assigned ATCC no. 203581. The protein of interest was assigned a "protein inventory number" (*e.g.*, PIN1308 and PIN1308-1). As set forth in the enclosed Exhibit B, the polypeptide was expressed in *E. coli* - PUR1009 (*see* page 2) on November 16, 1998; in *Baculovirus* - PUR1039 (*see* page 3) on November 23, 1998; and in mammalian cells (*see* page 4) on February 17, 1999. Furthermore, various constructs with poly-His or IgG tags were made from the time of first cloning and the construction of these was followed by expression and purification of the protein during the time period of prior to April 20, 1999 through March 13, 2003. For example, Exhibit C shows July 13, 1999 as the date of purification of a polypeptide having the sequence of SEQ ID NO:2. PIN1308 and/or PIN1308-1 were distributed to various scientists for multiple cell-based assays and/or quality confirmation tests from August 20, 1999 through January 22, 2001.

8. Exhibits D and E list the assays performed on the purified protein. Assay ASY110, called "Chondrocyte Re-differentiation Assay" was completed on November 10, 1999 for PIN1308-1, which is a polypeptide having the sequence of SEQ ID NO:2. PIN1308-1 was delivered to Luc Desnoyers for one of the assay runs on October 22, 1999; testing was completed on November 10, 1999. Exhibit E is an assay result list that shows positive results for the assay completed on November 10, 1999, thereby confirming the ability of the claimed polypeptide to induce chondrocyte redifferentiation. Thus, actual reduction to practice occurred at least by November 10, 1999.

9. After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequence of SEQ ID NO:2, as well as the data showing the ability to induce chondrocyte redifferentiation. That application was filed on March 1, 2000.

10. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: 5/17/04
Luc Desnoyers

By: _____ Date: 5/17/04
William I. Wood

S:\DOCS\MTM\MTM-6140.DOC; 050304

EXHIBIT A

(16 pages; pages 4-19)

EXHIBIT A—PAGE 1

```
>Friday, April 16, 2004
>DNA44686 [Full]
>584 Sites [All Sites]
>                      [DNA44686], sheldens
>Sequence confirmed by phrap.

                                                 rmaI
                                             sau3AI maeI
                                             mboI/ndeII[dam-]
                        tsp509I[M.ecoRI-)    dpnI:[dam-]
                       ecoRI                 dpnI[dam+]
                      taqI                   alwI[dam-)  sau3AI
                     sfuI                   nlaIV  xbaI  mboI/ndeII[dam-]             scrFI[M.hpaII-]
                     bst3I      mwoI     haeIII/palI bfaI dpnII[dam-)             hgaI ncil
                     bsiCI      bglI[M.haeIII-)    hpy188III    taqI              thai  mspI
                   tfiI apoI   sfiI     eaeI bstYI/xhoII  dpnI[dam+]              fnuDII/mvnI        bs
                   hinfI[M.taqI-)       cfrI bamHI[M.mspI-)   mnlI                bstUI hpaII       mnl:
         mnlI     taqI[M.claI-]  haeIII/palI   alwI[dam-)   alwI[dam-]            bshi236I  sfaNI   bseRI
      hpyCH4V    claI/bsp106   eaeI   bsrI  mspI[M.bamHI-][M.haeIII-]   taqI   mluI   dsaV        bsaJI
     bsgI bsaJI  bspDI[dam-)   cfrI  tspRI  hpaII mnlI   bstYI/xhoII mnlI drdI aflIII bssKI      avaI  bs
1 CAACTGCACC TCGGTTCTAT CGATTCGAAT TCGGCCACAC TGGCCGGATC CTCTAGAGAT CCCTCGACCT CGACCCACGC GTCCGGGCAT CTGCCCGAGG
  GTTGACGTGG AGCCAAGATA GCTAAGCTTA AGCCGGTGTG ACCGGCCTAG GAGATCTCTA GGGAGCTGGA GCTGGGTGCG CAGGCCCGTA GACGGGCTCC
                                                                           insert starts here^


                          GSeqEdit, DNA44686 [Full], page 1
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EXHIBIT A—PAGE 2

GSeqEdit, DNA44686 [Full], page 2

EXHIBIT A—PAGE 3

```
                                            mwoI
                                            bglI[M.haeIII-]
                                           sau96I[M.haeIII-]
                                          sau96I[M.haeIII-]
                                          pspOMI/bsp120I
                                          nlaIV   scrFI[dcm-]
                                 sau96I[dcm-][M.haeIII-]
                              scrFI[dcm-] eco0109I/draII    scrFI[dcm-]
                              pspGI       scrFI[M.hpaII-]   pspGI
                              mvaI        nciI      pspGI   mvaI      nlaIII
                              ecoRII[dcm-] haeIII/palI      ecoRII[dcm-]
                              dsaV[dcm-]  bsp1286[M.haeIII-]         xcmI
                              bstNI       mspI      mvaI    dsaV[dcm-]
                              bssKI[dcm-] bmyI      ecoRII[dcm-]     styI
                              bsaJI       hpaII     dsaV[dcm-]       ncoI
                        sau96I[M.haeIII-] banII[M.haeIII-]  bstNI    dsaI
                   xcmI nlaIV apyI[dcm+]  apaI      bstNI   bssKI[dcm-]                           nlaIII
                   styI haeIII/palI       dsaV      bssKI[dcm-]      btgI/bstDSI                  rcaI
       mwoI  mnlI  bsaJI     bsaJI haeIII/palI      apyI[dcm+]       bsaJI                tspRI  hpy188I
      aluI taqI  mwoI   eco0109I/draII    bssKI  mnlI   bsmI  apyI[dcm+]             nlaIV bsrI  bspHI
301 ACAGCTTTCG AGGCTACCAA GGCCCCCCTG GGCCACCGGG CCCTCCTGGC ATTCCAGGAA ACCATGGAAA CAATGGCAAC AATGGAGCCA CTGGTCATGA
    TGTCGAAAGC TCCGATGGTT CCGGGGGGAC CCGGTGGCCC GGGAGGACCG TAAGGTCCTT TGGTACCTTT GTTACCGTTG TTACCTCGGT GACCAGTACT
48   S  F  R   G  Y  Q   G  P  P  G   P  P  G   P  P  G   I  P  G  N   H  G  N   N  G  N   N  G  A  T   G  H  E
```

GSeqEdit, DNA44686 [Full], page 3

EXHIBIT A—PAGE 4

EXHIBIT A—PAGE 5

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EXHIBIT A—PAGE 6

EXHIBIT A—PAGE 7

GSeqEdit, DNA44686 [Full], page 7

EXHIBIT A—PAGE 8

```
                      sau3AI
                      mboI/ndeII[dam-]             tsp509I[M.ecoRI-]
                      dpnII[dam-]                 ecoRI                    tru9I
                      dpnI[dam+]       tru9I      apoI                     mseI                                bs
                      alwI[dam-]       mseI     hpy188I                  ahaIII/draI           aluI            bs
1401 CTTTGACCCT TTCCTTTTGA TCCACAAAAT ACATTAAAAC TCTGAATTCA CATACAATGC TATTTTAAAG TCAATAGATT TTAGCTATAA AGTGCTTGAC
     GAAACTGGGA AAGGAAAACT AGGTGTTTTA TGTAATTTTG AGACTTAAGT GTATGTTACG ATAAAATTTC AGTTATCTAA AATCGATATT TCACGAACTG

                                                                fokI
                                                                bstF5I        mnlI              tru9I
                  tsp509I                           bslI      hpy188I      hpy188III  mnlI      mseI
1501 CAGTAATGTG GTTGTAATTT TGTGTATGTT CCCCCACATC GCCCCCAACT TCGGATGTGG GGTCAGGAGG TTGAGGTTCA CTATTAACAA ATGTCATAAA
     GTCATTACAC CAACATTAAA ACACATACAA GGGGGTGTAG CGGGGGTTGA AGCCTACACC CCAGTCCTCC AACTCCAAGT GATAATTGTT TACAGTATTT

                                                     hincII/hindII
                 tspRI                             nlaIII
              rsaI                                nspHI                    mbcII             tru9I
              csp6I                               nspI                   eco57I              mseI         ddeI
          mnlI  bst4CI/hpyCH4III               hpyCH4V        mnlI       hpy188I            aseI/asnI/vspI
1601 TATCTCATAG AGGTACAGTG CCAATAGATA TTCAAATGTT GCATGTTGAC CAGAGGGATT TTATATCTGA AGAACATACA CTATTAATAA ATACCTTAGA
     ATAGAGTATC TCCATGTCAC GGTTATCTAT AAGTTTACAA CGTACAACTG GTCTCCCTAA AATATAGACT TCTTGTATGT GATAATTATT TATGGAATCT
```

GSeqEdit, DNA44686 [Full], page 8

EXHIBIT A—PAGE 9

EXHIBIT A—PAGE 10

```
> Length: 1906

   acc I (GTMKAC):          1832
   aci I (CCGC):            452 1815 1819 1870
   afl III (ACRYGT):        77
   aha II (TTTAAA):         1464
   alu I (AGCT):            116 175 303 741 793 918 942 947 1356 1368 1393 1483 1863 1896
   alw I (GGATCNNNN):       46 47 58 1419
   ape I (GGGCCC):          338 628
   apo I (RAATTY):          27 1221 1444
   apy I (CCNGG):           111 327 345 354 434 1713
   ase I (ATTAAT):          1683
   asn I (ATTAAT):          1683
   asp 718 I (GMGCWC):      115
   ava I (CYCGRG):          94 442 488
   ava II (GGWCC):          848
   ban HI (GGATCC):         46
   ban I (GGYRCC):          1149
   ban II (GRGCYC):         115 338 628 1068
   bbs I (GAAGACNNNNNN):    125 726 932 1095
   bbv I (GCAGC):           173 458 818 1357 1694
   bfa I (CTAG):            53 795 911 1354 1827
   bgl I (GCCNNNNNGGC):     34 340 1869
   blp I (GCTNAGC):         943 1394
   bmy I (GDGCHC):          115 338 628 1068 1349 1376
   bpm I (CTGGAG):          112
   bpu 1021 (GCTNAGC):      943 1394
   bpu AI (GAAGACNNNNNN):   125 726 932 1095
GSeqEdit, DNA44686 [Full], page 10
```

EXHIBIT A—PAGE 11

bsaI (GGTCTCNNNNN) :	100 582
bsaJI (CCNNGG) :	9 95 317 326 327 362 434 488 489 842 1145 1873
bsaWI (WCCGGW) :	255
bseRI (GAGGAGNNNNNNNNNN) :	97 1167
bsgI (GTGCAG) :	4
bsh1236I (CGCG) :	78 1820
bsiCI (TTCGAA) :	24
bsiEI (CGRYCG) :	1816
bsiHKAI (GWGCWC) :	115
bslI (CCNNNNNNNGG) :	249 633 922 1544 1837
bsmAI (GTCTC) :	100 136 245 295 582
bsmAI (GTCTC) :	100 136 245 295 582
bsmFI (GGGACNNNNNNNNNNNNNN) :	847
bsmI (GAATGCN) :	349 516
bsoFI (GCNGC) :	173 456 818 1357 1815 1818 1869 1894
bsp106 (ATCGAT) :	19
bsp120I (GGGCCC) :	338 628
bsp1286 (GDGCHC) :	115 338 628 1068 1349 1378
bsp1407I (TGTACA) :	736
bspCNI (CTCAGNNNNNNNNN) :	130 142 944 964 1071 1100 1123
bspDI (ATCGAT) :	19
bspHI (TCATGA) :	395 610
bspMI (ACCTGC) :	1177 1836
bsrBI (GAGCGG) :	450
bsrDI (GCAATGNN) :	829 992 1020
bsrGI (TGTACA) :	736
bsrI (ACTGGN) :	39 390 615 633 1252 1500
bssKI (CCNGG) :	83 111 327 336 345 354 434 488 489 1713
bst4CI (ACNGT) :	556 723 1615 1729
bstAPI (GCANNNNNTGC) :	1351

GSeqEdit, DNA44686 [Full], page 11

```
BstBI(TTCGAA):          24
BstDSI(CCRYGG):         362 842 1873
BstEII(GGTNACC):        429
Bst75I(GGATG):          680 769 806 1313 1553
BstNI(CCWGG):           111 327 345 354 434 1713
BstUI(CGCG):            78 1820
BstXI(CCANNNNNNTGG):    104 1500
Bs-YI(RGATCY):          46 57
BtgI(CCRYGG):           362 842 1873
BtsI(GCAGTGNN):         574
CacBI(GCNNGC):          194 794
CelI(GCTNAGC):          943 1394
CfoI(GCGC):             835
CfrI(YGGCCR):           32 41 1816 1867
ClaI(ATCGAT):           19
Csp6I(GTAC):            701 737 1041 1613
DdeI(CTNAG):            130 142 895 344 964 1071 1100 1123 1395 1695
DpnI(GATC):             47 58 961 1419
DpnII(GATC):            47 58 961 1419
DraI(TTTAAA):           1464
DraII(RGGNCCY):         320 338 437 627 628
DrdI(GACNNNNNNGTC):     72 1823
DsaI(CCRYGG):           362 842 1873
DsaV(CCNGG):            83 111 327 336 345 354 434 488 489 1713
EaeI(YGGCCR):           32 41 1816 1867
EagI(CGGCCG):           1816
Eci13611(GAGCTC):       115
Ec-X-(CGGCCG):          1616
Eco57I(CTGAAG):         567 542 569 659 728 789 1269 1667
EcoNI(CCTNNNNNAGG):     1837
GSeqEdit, DNA44686 [Full], page 12
```

EXHIBIT C—PAGE 13

eco0109I (RGGNCCY):	320 338 437 627 628
ecoRI (GAATTC):	27 1444
ecoRII (CCNGG):	111 327 345 354 434 1713
espI (GCTNAGC):	943 1394
fnu4HI (GCNGC):	173 458 818 1357 1815 1818 1869 1894
fnuDII (CGCG):	78 1820
fokI (GGATG):	680 769 806 1313 1553
gsuI (CTGGAG):	112
haeII (RGCGCY):	834
haeIII (GGCC):	33 42 321 331 339 439 465 629 1817 1868 1877
hgaI (GACGC):	79 1174
hgiAI (GNGCWC):	115
hhaI (GCGC):	835
hinPI (GCGC):	835
hincII (GTYRAC):	1645 1832
hindII (GTYRAC):	1645 1832
hindIII (AAGCTT):	1862
hinfI (GANTC):	22 138 157 243 494 877 1078 1308 1823 1830
hpaII (CCGG):	44 83 256 336 489
hphI (GGTGA):	411 429 655
hpy188I (TCNGA):	141 509 551 762 963 1072 1101 1171 1311 1441 1551 1666
hpy188III (TCNNGA):	52 227 395 610 1259 1563 1826
hpyCH4III (ACNGT):	556 723 1615 1729
hpyCH4V (TGCA):	5 276 515 709 872 1019 1215 1640 1839 1893
maeI (CTAG):	53 795 911 1354 1827
maeIII (GTNAC):	430 956
mboI (GATC):	47 58 961 1419
mboII (GAAGA):	126 568 652 727 932 1075 1096 1669
mcrI (CGRYCG):	1816
mluI (ACGCGT):	77

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EXHIBIT C—PAGE 14

mlyI(GAGTCNNNNN):	138 243 1823 1830
mnlI(CCTC):	9 50 62 68 97 144 170 209 259 310 342 441 445 678 687 810 966 982 1169 1382 1567 1573 1610 1653
mseI(TTAA):	974 1241 1246 1277 1434 1465 1584 1684 1781
mslI(CAYNNNNRTG):	675
mspI(CCGG):	44 83 256 336 489
mvaI(CCWGG):	111 327 345 354 434 1713
mvnI(CGCG):	78 1820
mwoI(GCNNNNNNNGC):	34 108 164 304 313 340 452 516 525 733 1351 1360 1869
nciI(CCSGG):	83 336 488 489
ncoI(CCATGG):	362 842 1873
ndeII(GATC):	47 58 961 1419
nheI(GCTAGC):	794
nlaIII(CATG):	161 239 291 363 396 462 521 611 665 675 734 780 843 1642 1874
nlaIV(GGNNCC):	46 321 338 384 402 437 465 627 628 629 847 1149 1262
notI(GCGGCCGC):	1815
nspHI(RCATGY):	733 1641
nspI(RCATGY):	733 1641
paeR7I(CTCGAG):	442
palI(GGCC):	33 42 321 331 339 439 465 629 1817 1868 1877
pleI(GAGTCNNNN):	138 243 1823 1830
psiI(TTATAA):	1293 1899
pspAI(CCCGGG):	488
pspGI(CCWGG):	111 327 345 354 434 1713
pspOMI(GGGCCC):	338 628
pstI(CTGCAG):	275 1838
rcaI(TCATGA):	395 610
rmaI(CTAG):	53 795 911 1354 1827
rsaI(GTAC):	701 737 1041 1613
sacI(GAGCTC):	115

GSeqEdit, DNA44686 [Full], page 14

```
sal1(GTCGAC):          1832
sau3AI(GATC):          47 58 961 1419
sau96I(GGNCC):         321 330 338 339 438 465 628 629 848 1877
scel(TAGGGATAACAGGGTAAT):  1844
scrFI(CCNGG):          83 111 327 336 345 354 434 488 489 1713
sfaNI(GCATC):          87 1127
sfcI(CTRYAG):          275 299 1035 1838
sfiI(GGCCNNNNNGGCC):   33 1868
sfuI(TTCGAA):          24
smaI(CCCGGG):          488
snlI(CTYRAG):          442
sspI(AATATT):          1187
sstI(GAGCTC):          115
styI(CCWWGG):          317 362 842 1145 1873
taqI(TCGA):            20 25 64 70 308 443 1833
tfiI(GAWTC):           22 157 494 877 1078 1308
thaI(CGCG):            78 1820
tliI(CTCGAG):          442
trs9?(TTAA):           974 1241 1246 1277 1434 1465 1584 1684 1781
tseI(GCWGC):           173 458 818 1357 1694
tsp45I(GTSAC):         436
tsp509I(AATT):         28 1009 1061 1163 1222 1243 1372 1445 1516
tspRI(NNCASTGNN):      38 389 557 575 1616
vspI(ATTAAT):          1683
xbaI(TCTAGA):          52 1826
xcmI(CCANNNNNNNNNTGG):  317 362
xhoI(CTCGAG):          442
xhoII(RGATCY):         46 57
xmaI(CCCGGG):          488
xmaIII(CGGCCG):        1816
GSeqEdit, DN44686 (Poli), page 15
```

not found:
AatII(GACGTC), acc65I(GGTACC), acc113I(TCCGGA), aclI(AACGTT), acyI(GRCGYC), afeI(AGCGCT), afl1I(CTTAAG), ageI(ACCGGT),
ahaII(GRCGYC), ahdI(GACNNNNNGTC), alw26I(CAGNNNCTG), alw44I(GTGCAC), alwNI(CAGNNNCTG), apaLI(GTGCAC), ascI(GGCGCGCC),
asp700(GAANNNNTTC), asp718(GGTACC), aspI(GACNNNGTC), avaIII(ATGCAT), aviII(TGCGCA), avrII(CCTAGG),
baeI(NNNNNNNNNNNNNNNACNNNNGTAYCNNNNNNNNNN), ball(TGGCCA), bbrPI(CACGTG), bceAI(ACGGCNNNNNNNNNNNN),
bcgI(NNNNNNNNNNCGANNNNNNNTGCNNNNNNNNNNNN), bciVI(GTATCC), bcl1(TGATCA), bfrBI(ATGCAT), bfrI(CTTAAG), bglII(AGATCT),
blnI(CCTAGG), bsaAI(YACGTR), bsa3I(GATNNNNATC), bsaHI(GRCGYC), bsaXI(NNNNNNNNNNNNNACNNNNNCTCCNNNNNNNNNN), bsiWI(CGTACG),
bsmBI(CGTCTCNNNNN), bspCI(CGATCG), bspEI(TCCGGA), bspMII(TCCGGA), bsrFI(RCCGGY), bssHII(GCGCGC), bssSI(CTCGTG),
bst1107I(GTATAC), bstZ17I(GTATAC), bsu36I(CCTNAGG), btrI(CACGTC), cfr10I(RCCGGY), cpoI(CGGWCCG), cspI(CGGWCCG),
draIII(CACNNNGTG), earI(CTCTTCNNNN), eciI(GGCGGA), eco47III(AGCGCT), eco72I(CACGTG),
eco81I(CCTNAGG), ecoRV(GATATC), eheI(GGCGCC), esp3I(CGTCTC), fseI(GGCCGGCC), fspI(TGCGCA), hinlI(GRCGYC), hpaI(GTTAAC),
hpy99I(CGWCG), hpyCH4IV(ACGT), kasI(GGCGCC), kpnI(GGTACC), ksp632I(CTCTTCNNNN), kspI(CCGCGG), maeII(ACGT),
mboI(GATNNNNATC), mfeI(CAATTG), mroI(TCCGGA), mscI(TGGCCA), mspA1I(CMGCKG), mstII(CCTNAGG), munI(CAATTG), naeI(GCCGGC),
narI(GGCGCC), ndeI(CATATG), ngoMI(GCCGGC), nruI(TCGCGA), nsiI(ATGCAT), nspBII(CMGCKG), pacI(TTAATTAA), pciI(ACATGT),
pflFI(GACNNNGTC), pflMI(CCANNNNTGG), pmeI(GTTTAAAC), pmlI(CACGTG), ppu10I(ATGCAT), ppuMI(RGGWCCY), pshAI(GACNNNNGTC),
psp1406I(AACGTT), pvuI(CGATCG), pvuII(CAGCTG), rsrII(CGGWCCG), sacII(CCGCGG), sanDI(GGGWCCC), sapI(GCTCTTCNNNN),
sauI(CCTNAGG), sbfI(CCTGCAGG), scaI(AGTACT), sexAI(ACCWGGT), sgfI(GCGATCGC), sgrAI(CRCCGGYG), snaBI(TACGTA), sneI(GTGCAC),
sroI(GTGCAC), speI(ACTAGT), sphI(GCATGC), spliI(CGTACG), srfI(GCCCGGGC), sse8387I(CCTGCAGG), sstII(CCGCGG), stuI(AGGCCT),
swaI(ATTTAAAT), taiI(ACGT), tth111I(GACNNNGTC), xmnI(GAANNNNTTC)

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EXHIBIT B

(4 pages; page 21-24)

EXHIBIT B—PAGE 1

Protein Request

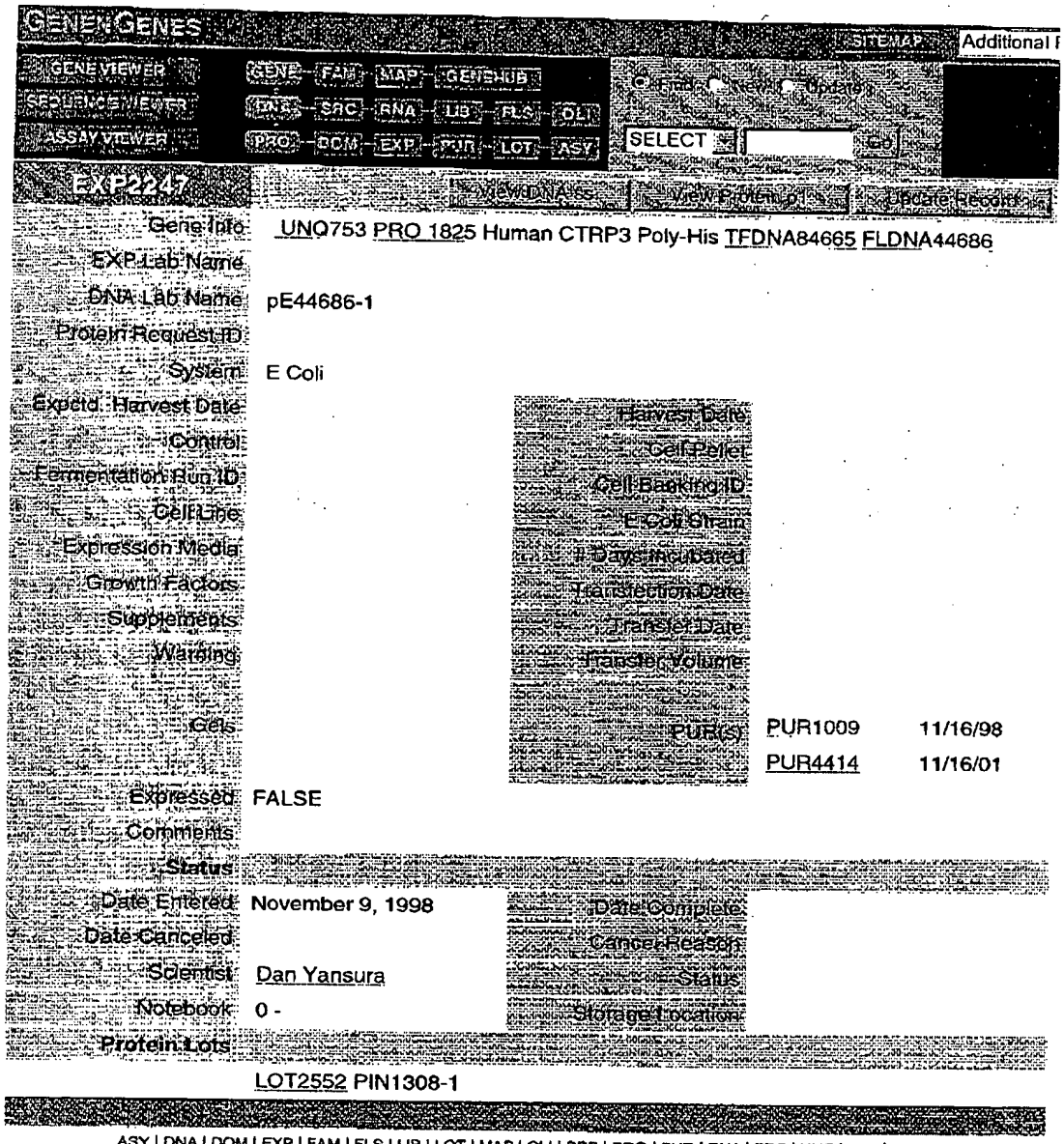
NEW/ADJST | SEARCH | PRODUCTION HISTORY

PRODUCTION HISTORY UNQ 753 Search

UNQ753 Human CTRP3 Poly-His

	Order Protein	Transfec DNA	Expr System	Formal Name	PRO	Protein Request	Expr	PUR	PUR Status	PUR Warning	Culture Yield
1.	Order	DNA84665	E Coli	Human CTRP3 Poly-His	PRO1825		EXP2247	PUR1009	Done		
2.	Order	DNA84665	E Coli	Human CTRP3 Poly-His	PRO1825		EXP2247	PUR4414	Done		
3.	Order	DNA87982	Baculovirus	Human CTRP3 IgG	PRO1855		EXP2255	PUR1039	Drop		1
4.	Order	DNA102368	Mammalian Stable	Human CTRP3 Poly-His	PRO4365		EXP2294				

EXHIBIT B—PAGE 2



GENENGENES

SITEMAP | Additional F

GENE VIEWER | SEQUENCE VIEWER | ASSAY VIEWER

GENE | FAM | MAP | GENEHUB

DNA | SRC | RNA | LIB | FLS | OLI

PRO | DOM | EXP | PUR | LOT | ASY

Clipped | New | Updated

SELECT | Go

EXP2247

View DNA Seq | View Protein Seq | Update Record

Gene Info	UNQ753 PRO 1825 Human CTRP3 Poly-His TFDNA84665 FLDNA44686
EXP Lab Name	
DNA Lab Name	pE44686-1
Protein Request ID	
System	E Coli
Expctd. Harvest Date	
Control	
Fermentation Run ID	
Cell Line	
Expression Media	
Growth Factors	
Supplements	
Warning	
Gels	
Expressed	FALSE
Comments	

Harvest Date		
Cell Pellet		
Cell Banking ID		
E Coli Strain		
# Days Incubated		
Transfection Date		
Transfer Date		
Transfer Volume		
PUR(s)	PUR1009	11/16/98
	PUR4414	11/16/01

Status

Date Entered	November 9, 1998	Date Complete	
Date Canceled		Cancel Reason	
Scientist	Dan Yansura	Status	
Notebook	0 -	Storage Location	

Protein Lots

LOT2552 PIN1308-1

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST

Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

EXHIBIT B—PAGE 3

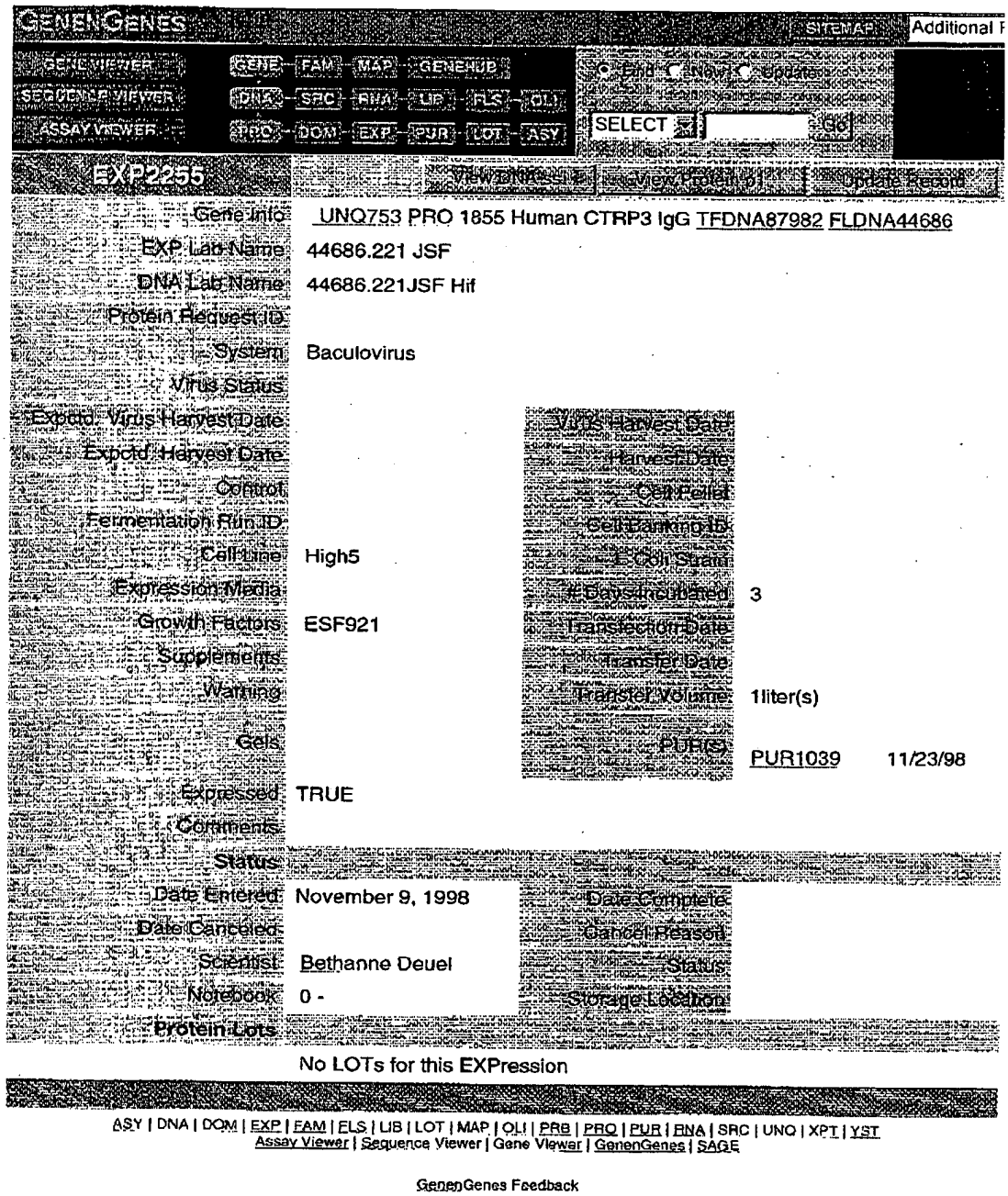
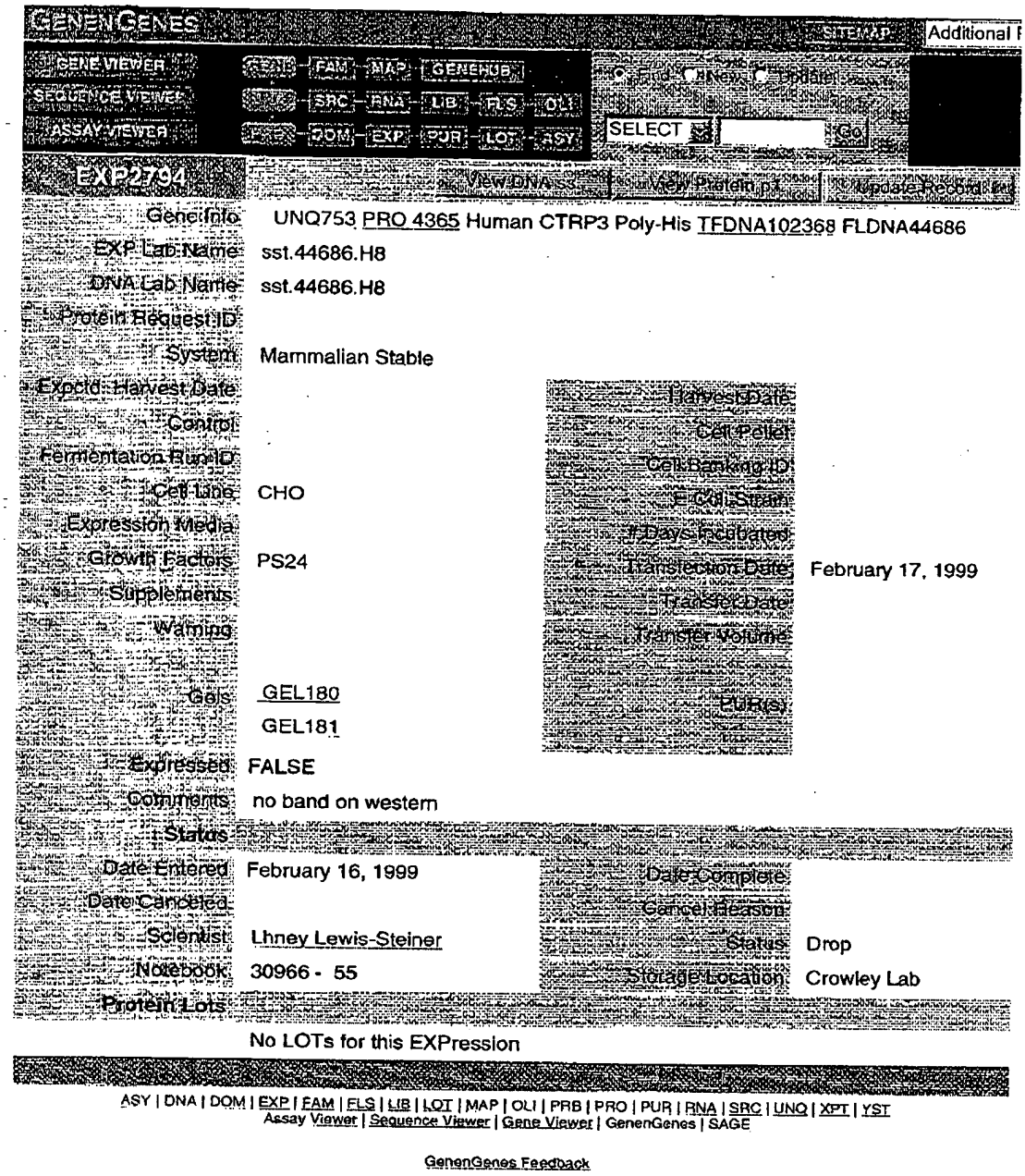


EXHIBIT B—PAGE 4



GENENGENES

SITEMAP | Additional F

GENE VIEWER | SEQUENCE VIEWER | ASSAY VIEWER

CLN | FAM | MAP | GENEHUB | SRC | RNA | LIB | FLS | OLI | PRB | DOM | EXP | PUR | LOT | XST

Find | New | Update

SELECT | Go

EXP2794 | View DNA | View Protein p3 | Update Record

Gene Info: UNQ753 PRO 4365 Human CTRP3 Poly-His TFDNA102368 FLDNA44686

EXP Lab Name: sst.44686.H8

DNA Lab Name: sst.44686.H8

Protein Request ID:

System: Mammalian Stable

Exptd. Harvest Date:

Control:

Fermentation Run ID:

Cell Line: CHO

Expression Media:

Growth Factors: PS24

Supplements:

Warning:

Gels: GEL180, GEL181

Expressed: FALSE

Comments: no band on western

Harvest Date:

Cell Pellet:

Cell Banking ID:

E. Coli Strain:

Days Incubated:

Transfection Date: February 17, 1999

Transfer Date:

Transfer Volume:

PUR(s):

Status:

Date Entered: February 16, 1999

Date Canceled:

Scientist: Lhney Lewis-Steiner

Notebook: 30966 - 55

Date Complete:

Cancel Reason:

Status: Drop

Storage Location: Crowley Lab

Protein Lots:

No LOTs for this EXPression

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST

Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

EXHIBIT C

(2 pages; pages 26-27)

EXHIBIT C—PAGE 1

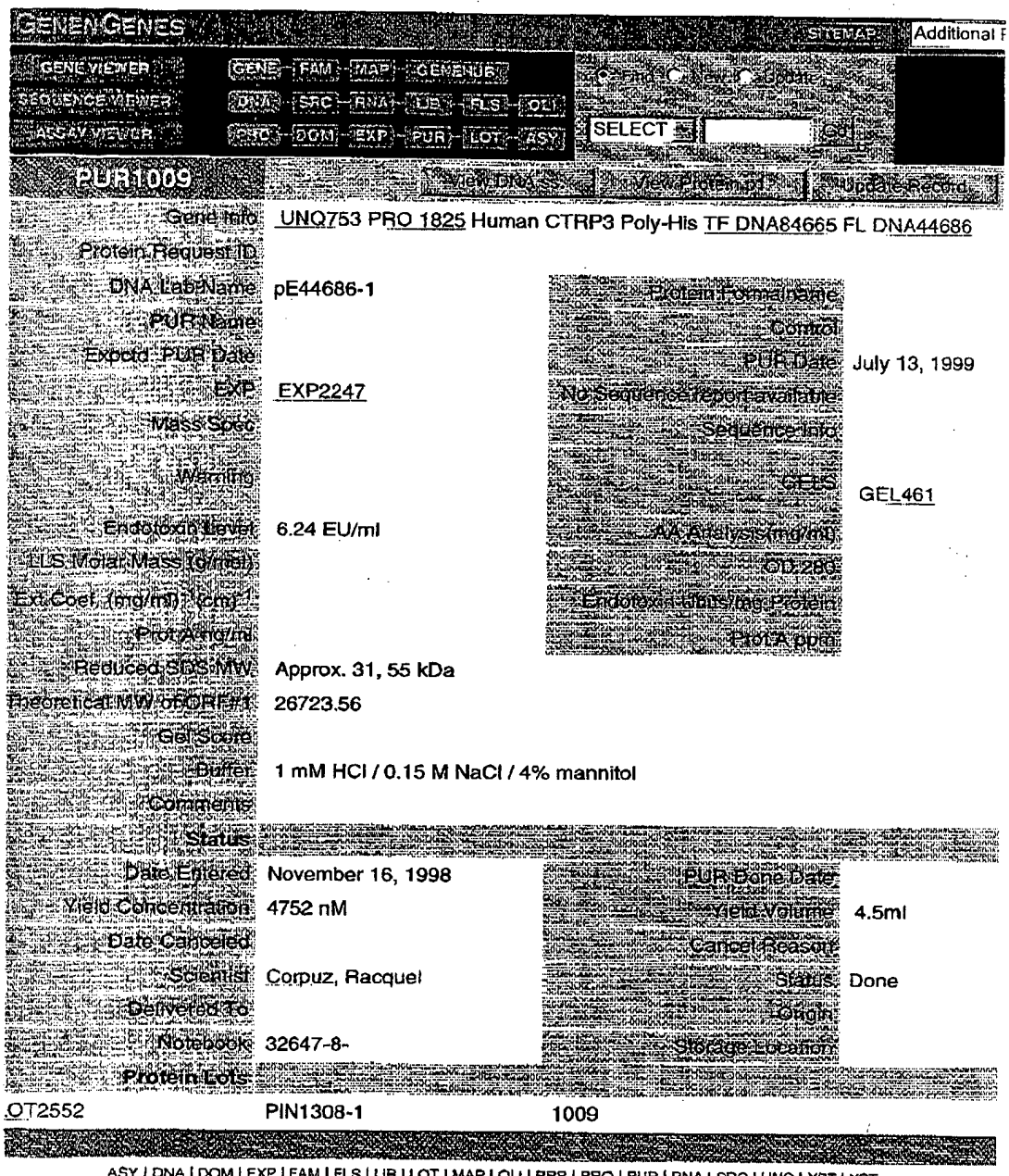
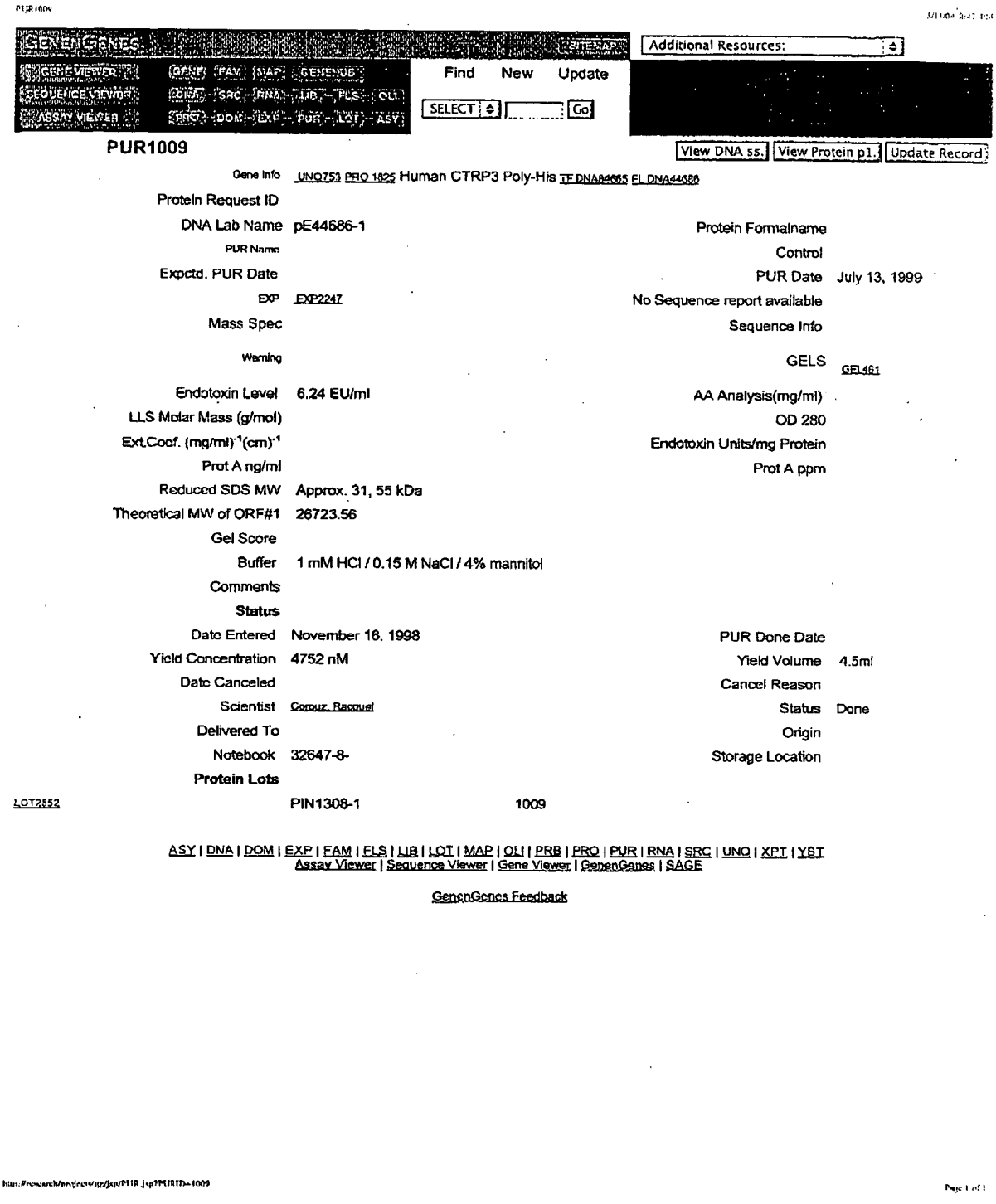


EXHIBIT C—PAGE 2



GENENGENES SITEMAP Additional Resources:

GENE VIEWER | GENE | FAV | MAP | GENEHUB
SEQUENCE VIEWER | DNA | SRC | RNA | LIB | PLS | CLI
ASSAY VIEWER | ASY | DOM | EXP | PUR | LOT | ASY

Find New Update
SELECT Go

PUR1009

View DNA ss. | View Protein pI. | Update Record

Gene Info	UNQ753 PRO1825 Human CTRP3 Poly-His TF DNA44685 FL DNA44686		
Protein Request ID			
DNA Lab Name	pE44686-1	Protein Formalname	
PUR Name		Control	
Expctd. PUR Date		PUR Date	July 13, 1999
EXP	EXP2247	No Sequence report available	
Mass Spec		Sequence Info	
Warning		GELS	GEL461
Endotoxin Level	6.24 EU/ml	AA Analysis(mg/ml)	
LLS Molar Mass (g/mol)		OD 280	
Ext.Coef. $(mg/ml)^{-1}(cm)^{-1}$		Endotoxin Units/mg Protein	
Prot A ng/ml		Prot A ppm	
Reduced SDS MW	Approx. 31, 55 kDa		
Theoretical MW of ORF#1	26723.56		
Gel Score			
Buffer	1 mM HCl / 0.15 M NaCl / 4% mannitol		
Comments			
Status			
Date Entered	November 16, 1998	PUR Done Date	
Yield Concentration	4752 nM	Yield Volume	4.5ml
Date Canceled		Cancel Reason	
Scientist	Corpuz, Raquel	Status	Done
Delivered To		Origin	
Notebook	32647-8-	Storage Location	
Protein Lots			
LOT2552	PIN1308-1	1009	

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

EXHIBIT D

(3 pages; pages 29-31)

EXHIBIT D—PAGE 1

GENENGENES

GENE VIEWER | GENE | FAM | MAP | GENEHUB
SEQUENCE VIEWER | DNA | SRC | RNA | LIB | FLS | OLI
ASSAY VIEWER | PRO | DOM | EXP | PUR | LOT | ASY

Find / New / Update — SELECT — Go

SITEMAP — Additional Resources:

LOT2552

Gene Info	UNQ753 PRO1825 Human CTRP3 Poly-His DNA84665 PUR1009 EXP2247
Inventory Lot Name	PIN1308-1
Control	
Initial Volume	
Comments	some comment
Status	
Date Entered	August 5, 1999
Date Canceled	
Cancel Reason	
Registry	--
Available	Yes
Storage Location	

Related Protein Lots

LOT	DNA	PRO	PUR	LOT Name	Protein Formal Name
LOT2552	DNA84665	PRO1825	PUR1009	PIN1308-1	Human CTRP3 Poly-His

Assay LOT Distribution

ASY	Status	Distribution Date	Result Date	Assay Name
ASY1	Retired	9/28/99	11/5/99	Heart Neonatal Hypertrophy
ASY8	Running	4/21/00	5/23/00	Endothelial cell proliferation
ASY9	Running	4/21/00	5/23/00	Inhibition of VEGF stimulated endothelial cell growth
ASY24	Retired	9/2/99	9/28/99	MLR - Stimulatory
ASY32	Retired	11/4/99	12/14/99	Guinea pig Proinflammatory activity [hairless]
ASY33	Running	12/10/01		Miscellaneous
ASY34	On Hold	9/14/99	11/8/99	Hu Venous Endothelial Cell c-fos Induction Assay
ASY51	Retired	11/4/99	12/14/99	Guinea pig Vascular Constrictor activity [hairless]

ASY64	Retired	11/4/99	12/14/99	Proinflammatory/PMN infiltrate
ASY67	Retired	9/2/99	9/28/99	MLR - Inhibitory
ASY68	On Hold	10/18/99	11/8/99	Hu Venous Endothellal Cell Ca Flux Assay
ASY74	Retired	9/28/99	11/8/99	Inhibition of Heart Neonatal Hypertrophy Induced by LIF+ET-1
ASY75	Retired	9/28/99	11/8/99	Enhancement of Heart Neonatal Hypertrophy Induced by LIF+I
ASY100	Running	8/20/99		Endotoxin Level (LAL)
ASY103	Running	9/1/99		Protein Gel Analysis
ASY106	Retired	10/2/99	12/1/99	Glucose and FFA uptake in Differentiated Skeletal Muscle
ASY106	Retired	12/3/99	1/4/00	Glucose and FFA uptake in Differentiated Skeletal Muscle
ASY107	Running	11/16/99	1/4/00	Fetal hemoglobin induction in an erythroblastic cell line
ASY110	Retired	10/22/99	11/10/99	Chondrocytes Re-differentiation Assay
ASY110	Retired	12/1/99	4/5/00	Chondrocytes Re-differentiation Assay
ASY110	Retired	12/15/99	3/27/00	Chondrocytes Re-differentiation Assay
ASY110	Retired	5/2/00	8/18/00	Chondrocytes Re-differentiation Assay
ASY110	Retired	5/16/00	8/18/00	Chondrocytes Re-differentiation Assay
ASY111	Retired	10/22/99	11/10/99	Chondrocyte Proliferation Assay
ASY111	Retired	12/1/99	4/5/00	Chondrocyte Proliferation Assay
ASY111	Retired	12/15/99	3/27/00	Chondrocyte Proliferation Assay
ASY111	Retired	5/2/00	8/18/00	Chondrocyte Proliferation Assay
ASY111	Retired	5/16/00	8/18/00	Chondrocyte Proliferation Assay
ASY118	Retired	1/12/00	2/1/00	Inhibition of A -Peptide Binding to Factor VIIA
ASY119	Retired	1/12/00	2/1/00	Inhibition of A - Peptide Binding to Factor VIIE
ASY128	Retired	5/5/00	6/20/00	Cytokine Release in Human Whole Blood
ASY129	Retired	5/16/00	8/18/00	Chondrocytes re-differentiation by Fluorescence
ASY130	Retired	5/16/00	8/18/00	Chondrocyes Proliferation by fluorescence
ASY132	Retired	6/23/00	8/7/00	Activation of NFkb
ASY134	Retired	10/13/00	11/30/00	Activatin of NfkB [Luciferase]
ASY134	Retired	12/5/00	1/22/01	Activatin of NfkB [Luciferase]
ASY135	Retired	9/12/00	10/19/00	Induction of E-selectin
ASY138	Running	2/23/01	4/9/01	Normal Human Iliac Artery Endothelial cells

EXHIBIT D—PAGE 3

ASY139	Running	2/23/01	4/9/01	Pooled Human Umbilical vein Endothelial cells	
ASY140	Running	2/23/01	4/9/01	Coronary artery Smooth Muscle cells	
ASY141	Running	2/23/01	4/9/01	Normal human Dermal Fibroblast Proliferation	
ASY142	Running	2/14/01	3/26/01	NF-kappa B Inhibition Assay	
ASY142	Running	3/8/01	3/26/01	NF-kappa B Inhibition Assay	
ASY146	Running	7/19/01	8/3/01	Human Microvascular Endothelial Cell Proliferation Assay	
ASY162	Running	11/16/99	9/5/00	NCI Oncology Screen-1	
ASY165	Running	8/1/01	9/19/01	CREB	
ASY165	Running	9/19/01	9/24/01	CREB	
ASY170	Piloting	11/9/01	11/16/01	NHEK proliferation assay	
ASY174	Piloting	3/12/02	4/3/02	Bovine Retinal M Endotrelial	
ASY174	Piloting	4/4/02		Bovine Retinal M Endotrelial	
ASY174	Piloting	5/17/02		Bovine Retinal M Endotrelial	
ASY174	Piloting	11/20/02		Bovine Retinal M Endothelial	
ASY175	Running	12/21/01		Neuronal Differentiation using Rinat technology	
ASY175	Running	5/30/02		Neuronal Differentiation using Rinat technology	
ASY176	Piloting	5/31/02		Heamoglobin Assay	
ASY176	Piloting	7/16/02		Heamoglobin Assay	
ASY177	Piloting	4/22/03	8/18/03	fibroblast migration assay	
ASY178	Running	1/23/03		Proliferation of Fibroblasts	
ASY180	Running	3/11/03	3/25/03	Mouse Keratinocyte Assay	
ASY181	Running	3/6/03	3/13/03	Human Mammary Epithelial Cell Assay	

ASY | RNA | PPM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGanes | SAGE

GenenGanes Feedback

EXHIBIT E

(2 pages; pages 33-34)

EXHIBIT E—PAGE 1

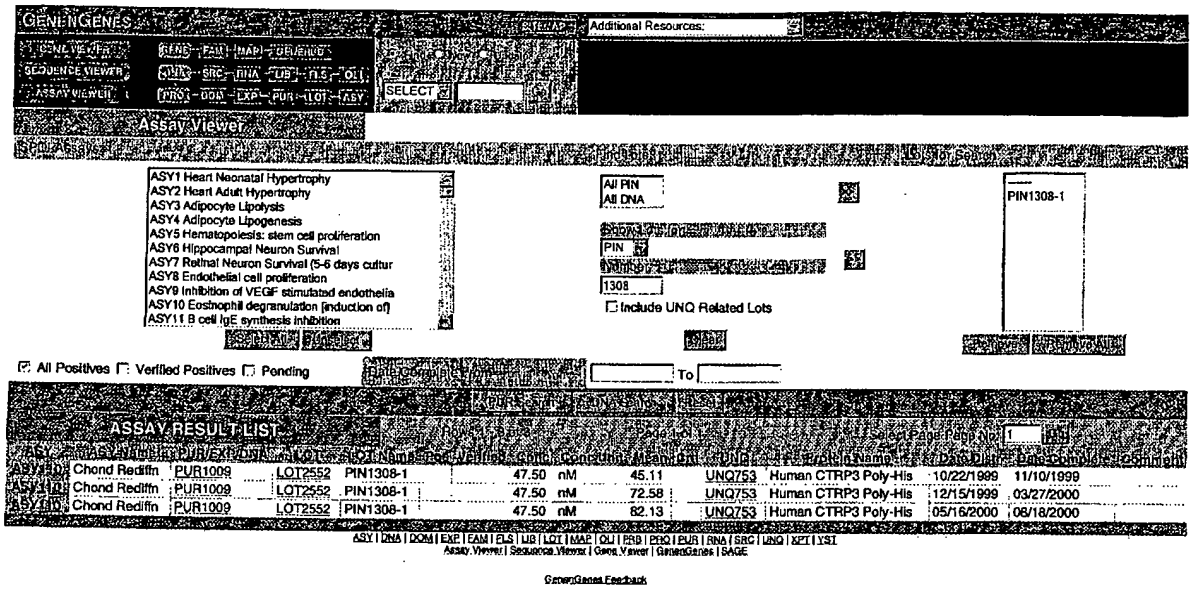


EXHIBIT E—PAGE 2